

Patent claims:

1. A process for removing fine dust from a fluidized-bed reactor, in particular for the oxychlorination of ethylene, wherein the fine dust inside the reactor is removed via filter cartridges, in particular sintered metal filter cartridges, and the reaction gas mixture is passed to the quench from the reactor dome.

2. The process as claimed in claim 1, wherein a part-stream in the form of a bypass stream having a predetermined fine dust fraction below a predetermined particle size is removed from the reactor in addition to the main stream.

3. The process as claimed in claim 1 or 2, wherein the main stream and the bypass stream are removed from separate dome spaces of the reactor.

4. The process as claimed in claim 1 or in any of the following claims, wherein the bypass stream is switched on and off according to an analysis of a catalyst sample and/or a change in the heat transfer and/or a deterioration of the fluidization behavior.

5. A fluidized-bed reactor, in particular for the oxychlorination of ethylene, with the use of catalyst granules subjected to abrasion, wherein at least one baseplate (4) having sintered metal filter cartridges (5) is provided in the dome (6) of the reactor (1), the filter

cartridges optionally dipping into the upper region of the fluidized bed (2).

6. The fluidized-bed reactor as claimed in claim 5, wherein the dome space (6) is divided, above the plate carrying the filter cartridges (5) on its lower surface, into at least two chambers (6, 6a), each having an outlet (11) for a main stream to the quench and a bypass stream (8).

7. The fluidized-bed reactor as claimed in claim 6, wherein the filter elements (5a) coordinated with the bypass (8) have a pore size differing from that of the fine dust filter cartridges (5), for the controlled passage of fine dust fractions.

8. The fluidized-bed reactor as claimed in claim 5 or in any of the following claims, wherein the ratio of filter elements (5a) allowing through fine dust to filter cartridges (5) retaining the fine dust is in the region of 1:9.

9. The fluidized-bed reactor as claimed in claim 5 or in any of the following claims, wherein the baseplate (4) is provided with a cleaning means by means of compressed gas pulses.

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